



HIGHLAND COUNTY ENGINEER ANNUAL REPORT

May 5, 2022

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Engineer's Review



One of the requirements within the Ohio Revised Code under section 5543.02 is for the County Engineer to provide the County Commissioners an annual report. This report includes the status of the infrastructure under the Engineer's jurisdiction. This report also serves as an update to the citizens of

how the funding was distributed within the department.

In 2021, we still saw effects of the pandemic on our daily lives. I want to thank our employees for continuing to work everyday to maintain all of our operational needs. The pandemic continues to also effect our revenue. Based on lost revenue calculations from 2021, our funds are down by over \$550,000. Over the last two years we are over \$1,200,000 down in projected revenue.

In 2022, we are facing new challenge. We are experiencing supply issues, as material is taking 6–8 months lead time to receive. Inflation and supply is causing estimating to be difficult as prices are changing daily. With all of these challenges our

goal each year continues to be identifying the critical needs of our infrastructure system. We budget our funds in a way to provide the most benefit to the Highland County residents.

Some of the statistics for 2021 are as follow. We placed 1,404 LF of various concrete pipe. Installed 234 LF of four side box culverts on 4 different projects. Our mower guys mowed 3,920 miles of roadway right of way with 4 tractor mowers. The asphalt crew laid 3,454 tons of asphalt material patching, leveling, and paving over installed culverts. We contracted out 31 miles of chip seal and 7.2 miles of roadway paving. Lastly, we completed phase one of another safety intersection improvement project on Careytown-Roundhead Intersection.

Forecast Shows A Busy 2022

As we look to 2022 we hope material supply issues go back to normal. When we got further into 2021, receiving construction supplies became a challenge for us. Plastic and concrete pipe became a 4 month or longer wait to receive. Truck parts were on back order with no estimated date for stock. As for 2022 projects, we are focused on continuing the modernization of the GIS/Tax Map Office contract with the Sidwell Group, by hosting survey information and data online! Another project we are focused on is receiving grant money from Ohio Public Works Commission for the HIG CR Various Structure Replacements, which includes a 30ft span bridge and three other large four sided box culverts. We look forward to completing Phase 2 of the Careytown & Roundhead Intersection Improvement project that consist of linear grading and asphalt resurfacing of 5.420 miles of Careytown Road. Furthermore, other projects in the pipeline are 2022 Various Concrete pipe replacement, Federal FY23 Guardrail and Pavement Markings projects, HIG VAR CR Federal Paving FY 23 project, and about 20 county roadway miles of Chip Seal for the 2022 Highland County Chip Seal Program. Lastly, beginning the SR 73/CR 7 Mad River Intersection and horizontal curve alignment project, along with bidding HIG CR 239-0.88 Strait Creek Road Federal Bridge in November of 2022.

2021

GIS / TAX MAP OFFICE

The GIS and Tax Map Offices are located in the Highland County Administration Building, on the second floor, in Room 206. The Tax Map Office continues to ensure that land transfers and new surveys are within the guidelines of the Ohio Revised Code and the Highland County Planning Commission. They checked 2,751 instruments of transfer, 252 easements, 45 land contracts, and 349 surveys in 2021. They use the Highland County GIS system to print tax maps. The GIS Office continues to maintain the countywide database, which currently contains records for over 32,225 parcels. They continue to maintain and improve the data for the GIS system. The county signed a contract with the Sidwell Group in 2020 to update the Map Office and GIS office operating system. This new system should be up and running by the summer of 2022. With this new technology and software, we will be able to check documents a lot faster and be more time efficient. Some basic GIS information is also available on the internet at <http://highlandcountyauditor.org/>

SNOW & ICE REMOVAL

24 Call Outs

Regular Hours	1,868 hrs.
Overtime Hours	740 hrs.
Grit (#9 stone)	3400 ton
Salt	3000 ton
Calcium Chloride	9,000 gals.

ESTIMATED COST: \$401,607
(1/01/21— 12/31/21)

Budget Breakdown

2021 REVENUE

Motor Vehicle:	\$ 1,738,917.87
Gas Tax	\$ 3,739,694.30
Sales & Misc.	\$ 146,605.98
Reimbursements	\$ 52,582.18
Interest Income	\$ 5,697.99
Fines	\$ 636.09
Settlement	\$ 107.09
Permissive Levy	\$ 398,508.46

TOTAL: \$6,082,749.96

2021 EXPENDITURES

Personnel— Wages	\$ 2,077,127.46
Personnel—Fringe Benefits	\$ 234,732.28
Road Expenditures	\$ 1,208,725.95
Bridge/Culvert Expenditures	\$ 359,139.56
Capital Expenditures	\$ 706,441.39
Expenses	\$ 6,030.90
Supplies	\$ 6,291.98
Equipment	\$ 560,291.76

TOTAL: \$5,158,781.28

2021 Bridge and Major Culverts Replacements

Road	Bridge #	Type of Bridge	Cost
Sanders	29-1.05	Precast Concrete Box	\$ 141,466
Barker	59-0.79	Precast Concrete Box	\$ 43,308
Tedrick	32-0.18	Precast Concrete Box	\$ 86,274
Careytown	10-5.78	Precast Concrete Box	\$ 36,146
New Vienna	22-3.57	58" x 91" Squash Pipe	\$ 47,266
*VAR. Culverts	Various	12"-84" Culverts Bid Amount	\$ 86,725

**Dollar figure only includes cost of pipe*

TOTAL: \$ 441,185

12" -- 396 L.F. 18" -- 504 L.F. 24" -- 160 L.F. 30" -- 96 L.F. 54" -- 64 L.F. 60" -- 56 L.F.

66" -- 72 L.F. 72" -- 56 L.F. 22 culverts were replaced in 2021. These culverts ranged in sized from 12" to 72" in diameter.



HIG CR 29-1.05 Sanders Rd.



HIG CR 59-0.79 Barker Rd.



HIG CR 10-5.78 Careytown Rd.



HIG CR 8-5.10 Panhandle Rd.

Making The Roads Great Again!

With majority of our bridge and culvert structures in good to fair shape, Highland County Engineer's Office has shed more light on improving our county roads. Highland County has a little over 392 miles of roadways. Roadways are very costly to maintain and improve, as they are constantly taking a beating from daily traffic and thawing in the winter. This year we decided to invest in our roads more than just the typical Chip Seal. Highland County Engineer decided to do a one-inch leveling/surface course on 7.17 mile of county road. The county roads that received this pavement treatment were CR 92-A Ross Road, CR 22 B-C New Vienna Road, and CR 22 D-E Mullen Hill Road. These highly traveled roads run from Fairfield Road, near Leesburg schools, to SR 73. This project consist of spraying 5000 gallons of tack and placing 4550 tons of asphalt. The project was bided, in which the county received three competitive bids from local contractors in the area. The project was awarded to Miller Mason Paving Company for lowest bid of \$305,310.05. This project was completed in October of 2021. These roads are now smoother, have better cross slope for drainage, and most of all, safer!



HIG CR 22 New Vienna Rd.

2021 Highland Chip Seal Program

Road Name	Section	Miles	Cost
Bennington	75 A-B	2.360	\$ 22,108
Blue Ribbon	19-B	2.018	\$ 20,652
Connell	80-A	2.014	\$ 17,753
Grimsley	48-A	3.130	\$ 30,491
Bectal	15-A	1.499	\$ 16,352
Hardins Creek	15 B-C	3.189	\$ 30,319
Murtland	23 B-C	3.680	\$ 38,574
Quallen	23-A	1.147	\$ 12,469
Roberts	62-A	2.500	\$ 24,347
Sherry	57-A	2.997	\$ 30,277
Wingar	84-A	1.380	\$ 12,156
Wildcat	61 A-B	4.573	\$ 42,845
Total:		30.487	\$ 298,343

HIG CR 57-A Sherry Rd.



Project was bided and awarded to Miller-Mason Paving Company. Four townships decided to join the engineer's bid this year, adding \$169,987 and 19.737 miles to the 2021 Highland County Chip Seal Program!

Mill— Level—Compact—Pave



After having good luck with last year's new pavement repair approach, we tried it on a larger scale this year. We used the same 48" asphalt mill attracted to our John Deere Loader, milled up four foot of the edge of New Vienna Road where the road had base failure and extensive cracking. Then a grader was used to evenly spread the millings and then compacted the milled asphalt with a 9 ton roller. Lastly, we skim patched over the areas using a paver to seal off any water and unlevelled areas. In addition, the county crews did a lot of patching on several roads throughout the county. The county placed 3,454 tons of asphalt on 14 different roads.

Careytown & Roundhead Rd. Intersection Improvement

Highland County Engineer is checking unsafe intersections off, one by one. After completing the Overman and Petersburg Road Intersection improvement last year, the Highland County Engineer was able to receive funding again for the estimated, \$1,300,000 Careytown and Roundhead Road Intersection Improvement Project Phase 1 and 2. The Highland County Engineer's office was selected as 1 of 8 funded projects in the 15th district of Ohio Public Works Commission (OPWC) for a \$600,000 grant and \$500,000 in loan money at zero percent interest. This intersection was next on the Engineer's priority list of unsafe intersections. The main objective was to excavate six feet out of a hill on Careytown Road, just north of Roundhead Road where you were unable to see oncoming traffic when looking left as you were pulling out onto Careytown Road either direction. The intersection was designed in-house by the Highland County Engineer's Office Staff by using Ohio Department of Transportation Design Standards to make this intersection have adequate sight distance for the roadway design speed. The design or project consist of realigning of two vertical curves, new improved cross section design, and improved ditch drainages. The project went out for bid and two companies submitted proposals. Miller Mason Paving Company was awarded the contract in the amount of \$1,075,716.13. There was 925 feet of roadway reconstructed on Careytown Road and 280 feet of roadway reconstructed on Roundhead Road. In addition, to the intersection improvement, the other phase of this project is to linear grade both sides of Careytown Road, four feet wide for 5.245 miles in length. We then came back and paved one inch of asphalt concrete intermediate course, followed by one inch of asphalt concrete surface course. Lastly finish the resurfacing phase of Careytown Road by placing aggregate berm to the edge of the roadway and polyester pavement markings. Phase 2 of the Careytown and Roundhead Road Intersection Improvement project is expected to begin in the spring of 2022.



Project Before



Project After

Equipment Purchases

(2) - 2022 Western Star Dump Trucks
2015 John Deere Long Reach Tractor

2021 Eager Beaver 25XPL Trailer
(2) - 2021 XH1000 Schulte Rotary Cutters

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Congratulations Dale on retirement!



Thank you for your 33 years of service!